

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

PARK, Kyungwan

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PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) 12 JULY 2005 (12.07.2005)

Applicant's or agent's file reference  
PCT0501KAIST

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/KR2005/000346

International filing date (day/month/year)

04 FEBRUARY 2005 (04.02.2005)

Priority date(day/month/year)

12 FEBRUARY 2004 (12.02.2004)

International Patent Classification (IPC) or both national classification and IPC

IPC7 G03F 7/00

Applicant

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

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## 2. FURTHER ACTION


If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR

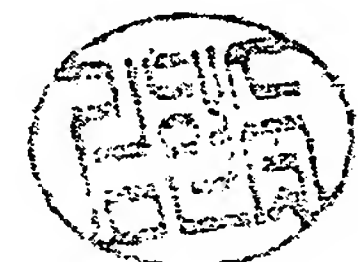
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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/KR2005/000346

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
  
☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2005/000346

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	7 - 29	YES
	Claims	1 - 6	NO
Inventive step (IS)	Claims		YES
	Claims	1 - 29	NO
Industrial applicability (IA)	Claims	1 - 29	YES
	Claims		NO

**2. Citations and explanations :**

1. The present invention discloses a polymer pattern, and metal film pattern, metal pattern, a plastic mold using thereof, and a method of forming the same. Particularly, the present invention relates to polymer patterns having a rounded shape. And the present invention uses a metal instead of polymer for forming a pattern.

2. Reference is made to the following documents:

D1: JP 2000-241607 A2

3. Novelty and Inventive Step under Art. 33(2)(3) PCT

a) D1 discloses a microlens array and a forming method thereof. The fig. 4 of D1 shows a polymer pattern having a rounded shape.

Though D1 does not use the metal for claim 8 of the present invention, this selection in the material can be easily made by a person skilled in the art and the method of forming a pattern can be easily invented by a person skilled in the art as well.

Therefore, the dependent claims 3 to 5 which disclose preferred embodiments of claim 1 can be deduced from the cited prior art documents without an inventive effort.

The forming methods of the present invention are a well known method for the forming method of a pattern.

4. Industrial Applicability under Art. 33(4) PCT

Claims 1 - 29 meet the criteria set out in PCT Article 33(4), because the claimed invention is directed to lithography for forming a device

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